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**TRANSMITTAL  
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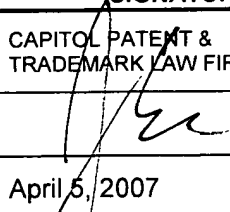
(to be used for all correspondence after initial filing)

Application Number	09/919,047
Filing Date	July 31, 2001
Inventor(s)	Ramesh Nagarajan et al.
Group Art Unit	2613
Examiner Name	Nathan M. Curs
Attorney Docket Number	129250-002056US

**ENCLOSURES (check all that apply)**

<input checked="" type="checkbox"/> Fee Transmittal Form  <input type="checkbox"/> Fee Attached  <input type="checkbox"/> Amendment <input type="checkbox"/> After Final  <input type="checkbox"/> Affidavits/declaration(s)  <input type="checkbox"/> Extension of Time Request  <input type="checkbox"/> Express Abandonment Request  <input type="checkbox"/> Information Disclosure Statement  <input type="checkbox"/> Certified Copy of Priority Document(s)  <input type="checkbox"/> Response to Missing Parts/Incomplete Application  <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Assignment Papers (for an Application)  <input type="checkbox"/> Letter to the Official Draftsperson and _____ Sheets of Formal Drawing(s)  <input type="checkbox"/> Licensing-related Papers  <input type="checkbox"/> Petition  <input type="checkbox"/> Petition to Convert to a Provisional Application  <input type="checkbox"/> Change of Correspondence Address and revocation/POA  <input type="checkbox"/> Terminal Disclaimer  <input type="checkbox"/> Request for Refund  <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance Communication to Group  <input type="checkbox"/> LETTER SUBMITTING APPEAL BRIEF AND APPEAL BRIEF (w/clean version of pending claims)  <input checked="" type="checkbox"/> Appeal Communication to Group (Notice of Appeal, <u>Appeal Brief</u> , Reply Brief)  <input type="checkbox"/> Proprietary Information  <input type="checkbox"/> Status Letter  <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): Check No. 1306 for \$500		
<table border="1" style="width: 100%;"> <tr> <td style="width: 20%;">Remarks</td> <td></td> </tr> </table>			Remarks	
Remarks				

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm or Individual name	CAPITOL PATENT & TRADEMARK LAW FIRM, PLLC	Attorney Name John E. Curtin	Reg. No. 37,602
Signature			
Date	April 5, 2007		

# FEE TRANSMITTAL for FY 2007

Effective 10/01/2004. Patent fees are subject to annual revision.

Complete if Known

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$ 500

Application Number 09/919,047  
Filing Date July 31, 2001  
First Named Inventor Ramesh Nagarajan  
Examiner Name Nathan M. Curs  
Art Unit 2613  
Attorney Docket No. 129250-002056/US

## METHOD OF PAYMENT (check all that apply)

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## FEE CALCULATION

### 1. BASIC FILING FEE

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1011	300	2011	150	Utility filing fee	
1012	200	2012	100	Design filing fee	
1013	200	2013	100	Plant filing fee	
1014	300	2014	150	Reissue filing fee	
1005	200	2005	100	Provisional filing fee	

SUBTOTAL (1)

(\$ 0

### 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Total Claims	Extra Claims	Fee from below	Fee Paid
20 **	X		0
Independent Claims	-3 **	X	0
Multiple Dependent			0

Large Entity		Small Entity		Fee Description
Fee Code	Fee (\$)	Fee Code	Fee (\$)	
1202	50	2202	25	Claims in excess of 20
1201	200	2201	100	Independent claims in excess of 3
1203	360	2203	180	Multiple dependent claim, if not paid
1204	200	2204	100	** Reissue independent claims over original patent
1205	50	2205	25	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2)

(\$ 0

\*\*or number previously paid, if greater; For Reissues, see above

## FEE CALCULATION (continued)

### 3. ADDITIONAL FEES

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet.	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	120	2251	60	Extension for reply within first month	
1252	450	2252	225	Extension for reply within second month	
1253	1020	2253	510	Extension for reply within third month	
1254	1,590	2254	795	Extension for reply within fourth month	
1255	2,160	2255	1080	Extension for reply within fifth month	
1401	500	2401	250	Notice of Appeal	500
1402	500	2402	250	Filing a brief in support of an appeal	
1403	1000	2403	500	Request for oral hearing	
1452	500	2452	250	Petition to revive - unavoidable	
1453	1500	2453	750	Petition to revive - unintentional	
1501	1400	2501	700	Utility issue fee (or reissue)	
1502	800	2502	400	Design issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17 (q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	790	2809	395	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	790	2810	395	For each additional invention to be examined (37 CFR § 1.129(b))	
1801	790	2801	395	Request for Continued Examination (RCE)	

Other fee (specify) \_\_\_\_\_

\*Reduced by Basic Filing Fee Paid SUBTOTAL (3) (\$500

### 4. SEARCH/EXAMINATION FEES

Large Entity		Small Entity		Fee Description
Fee Code	Fee (\$)	Fee Code	Fee (\$)	
1111	500	2111	250	Utility Search Fee
1112	100	2112	50	Design Search Fee
1113	300	2113	150	Plant Search Fee
1114	500	2114	250	Reissue Search Fee
1311	200	2311	100	Utility Examination Fee
1312	130	2312	65	Design Examination Fee
1313	160	2313	80	Plant Examination Fee
1314	600	2314	300	Reissue Examination Fee

SUBTOTAL (4) (\$0

## SUBMITTED BY

Name (Print/Type)	John E. Curtin	Registration No. (Attorney/Agent)	37,602	Telephone	(703)266-3330
Signature				Date	April 5, 2007

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**IN THE U.S. PATENT AND TRADEMARK OFFICE**

Application No.: 09/919,047

Filing Date: July 31, 2001

Applicant: Ramesh Nagarajan et al.

Group Art Unit: 2613

Examiner: Nathan M. Curs

Title: CONNECTION SETUP STRATEGIES IN OPTICAL  
TRANSPORT NETWORKS

Attorney Docket: 129250-002056/US

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**APPLICANTS'/APPELLANTS' BRIEF ON APPEAL**

**MAIL STOP APPEAL BRIEF - PATENTS**

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April 5, 2007

04/06/2007 JADD01 00000012 09919047

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**APPELLANTS' BRIEF ON APPEAL**

**I. REAL PARTY IN INTEREST:**

The real party in interest in this appeal is Lucent Technologies Inc. Assignment of the application was submitted to the U.S. Patent and Trademark Office and recorded at Reel 012193, Frame 0449.

**II. RELATED APPEALS AND INTERFERENCES:**

There are no known appeals or interferences that will affect, be directly affected by, or have a bearing on the Board's decision in this Appeal.

**III. STATUS OF CLAIMS:**

Claims 1 and 3-17 are pending in the application, with claims 1, 9, 10, 11 and 17 being written in independent form.

Claims 1, 3-7, 9-15 and 17 remain finally rejected under 35 U.S.C. §102(a) and claims 8 and 16 remain finally rejected under 35 U.S.C. §103(a).

**IV. STATUS OF AMENDMENTS:**

A Request for Reconsideration ("Request") was filed on January 5, 2007. In an Advisory Action dated February 1, 2007 the Examiner stated that the Request was considered but did not place the application in condition for allowance.

**V. SUMMARY OF CLAIMED SUBJECT MATTER:**

**(i). Overview of the Subject Matter of the Independent Claims**

The present invention is directed at reducing the connection set-up time needed to form a link between nodes in a communication network. More specifically, independent claim 1 reads as follows (specification citations follow in parenthesis):

**1. A method for use in a node of a network during a connection setup between a source node and a destination node, the method comprising the steps of:**

**initiating a cross-connect with an adjacent node;  
at substantially the same time as the cross-connect is initiated, sending a connection setup message to a next node before the cross-connect is completed.**

(see specification, paragraphs [22], [23], [27] and [29-33], for example)

**6. A method for use in a node of a network during a connection setup between a source node and a destination node, the connection setup comprising a forward pass of signaling messages from the source node to the destination node and a reverse pass of signaling messages from the destination node to the source node, the method comprising the steps of:**

**initiating a cross-connect with an adjacent node on the forward pass of the connection setup;  
at substantially the same time as the cross-connect is initiated, sending a connection setup message to a next node; and  
checking if the cross-connect was successful on the reverse pass of the connection setup.**

(see specification, page 3, line 34 to page 4, line 5; page 4, lines 31-33 and page 6, lines 14-19, for example)

**9. A method for use in a node of a network during a connection setup between a source node and a destination node, the method comprising the steps of:**

**sending a connection setup message to a next node at substantially the same time as a cross-connect is initiated; and**

**performing the cross-connect with a downstream node prior to receipt of a signaling message related to a status of at least one cross-connect operation performed at another downstream node.**

(see specification, page 3, line 34 to page 4, line 5; page 4, lines 31-33 and page 6, lines 14-19, for example).

**10. A method for use in a node of a network during a connection setup between a source node and a destination node, the method comprising the steps of:**

**sending a connection setup message to a next node from an upstream node at substantially the same time as a cross-connect is initiated; and**

**responsive to the received connection setup message, executing a cross-connect with a downstream node.**

(see specification, page 3, line 34 to page 4, line 5; page 4, lines 31-33 and page 6, lines 14-19, for example).

**11. Apparatus comprising:**

**a communications interface for providing signaling to a downstream node and for receiving signaling from an upstream node; and**

**a processor, responsive to receipt of a connection setup message, sent from the upstream node at substantially the same time as a cross-connect is initiated.**

(see specification, page 3, line 34 to page 4, line 5; page 4, lines 31-33; page 6, lines 14-19; and page 9, line 31 to page 10, line 4, for example).

**17. Apparatus comprising:**

**a communications interface for receiving signaling, sent from an upstream node at substantially the same time as a cross-connect is**

**initiated, at the upstream node on a forward pass of a connection setup and receiving signaling from a downstream node on a reverse pass of the connection setup; and**

**a processor for initiating a cross-connect with the downstream node on the forward pass, and for checking if the cross-connect was successful on the reverse pass.**

(see specification, page 3, line 34 to page 4, line 5; page 4, lines 31-33; page 6, lines 14-19; and page 9, line 31 to page 10, line 4, for example).

In order to make the overview set forth above concise the disclosure that has been included, or referred to, above only represents a portion of the total disclosure set forth in the Specification that supports the independent claims.

**(ii). The Remainder of the Specification Also Supports the Claims**

The Appellants note that there may be additional disclosure in the Specification that also supports the independent and dependent claims. Further, by referring to the disclosure above the Appellants do not represent that this is the only evidence that supports the independent claims nor do Appellants necessarily represent that this disclosure can be used to fully interpret the claims of the present invention. Instead, this disclosure is an overview of the claimed subject matter.

**VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL:**

Appellants seek the Board's review and reversal of the rejection of claims 1, 3-7, 9-15 and 17 under 35 U.S.C. §102(a) based on an article authored by Wei et al. (hereinafter "Wei") and claims 8 and 16 under 35 U.S.C. §103(a) based on Wei in view of an article by Qiao et al. ("Qiao").



## **VII. ARGUMENTS:**

### **A. The Section 102 Rejections**

Claims 1, 3-7, 9-15 and 17 were rejected under 35 U.S.C. §102(a) based on an article authored by Wei et al. (hereinafter "Wei"). Appellants disagree for at least the following reasons.

Each of the claims of the present invention includes the feature of, among other things, sending a connection setup message to a next node *at substantially the same time as a cross-connect is initiated*.

In contrast, Wei appears to send a SETUP message after a cross-connect is initiated (e.g., after a time period,  $t_p$  ).

In the Final Office Action the Examiner appears to take the position that the time period,  $t_p$ , in Wei is unrelated to a cross-connect. Instead, the Examiner prefers the time period  $t_c$ . However, both  $t_p$  and  $t_c$  are related to cross-connects.

In Figure 4 of Wei, a cross-connection SETUP message is sent by a "source" and is received at a first intermediate node. After a time period  $t_p$  has elapsed, the SETUP message is sent from the first node to the next hop node where the process is repeated (i.e.,  $t_p$  elapses before the SETUP message is forwarded onward). From Figure 4, the time period  $t_p$  is depicted as being a part of the cross-connection setup process at each intermediate node between the source and destination node. Thus, it cannot be said that Wei discloses the sending of a connection setup message to a next node at substantially the same time as a cross-connect is initiated because Wei's SETUP messages are sent only after a time period  $t_p$ , associated with the cross-connection setup process, has elapsed.

The Examiner describes the time period  $t_p$  as a "protocol messaging processing time". This is indeed the name given to this time period by Wei. However, the processing that occurs during  $t_p$  is related to the cross-connection

process. The fact that a cross-connect that is set up may be “cut-through” during a separate time period  $t_c$  that follows  $t_p$  does not detract from the fact that the cross-connect was initiated upon receipt of an initial SETUP message and processed during a time period  $t_p$ .

The Examiner also cites to pages 2023 and 2025 of Wei (see page 6 of Final Office Action). With respect to the text on these pages, the Examiner states that text on these pages demonstrates that “cross-connect *setup* is disclosed as happening in parallel with the next hop propagation”. However, cross-connect setup includes much more than cross-connect initiation; the latter is the claimed invention, the former is Wei. Said another way, the fact that Wei may disclose the forwarding of a SETUP message sometime during the time when a cross-connect is being set up is not akin to the claimed inventions, where setup messages are sent substantially at the same time as a cross-connect is *initiated*. As the Examiner can appreciate, the difference in time between a system that sends a SETUP message upon cross-connect initiation and one that waits at each node for a time period (e.g.,  $t_p$ ) to elapse may be substantial considering the distance between nodes or the number of nodes involved.

Further, Appellants again point out page 2029 to the Examiner. While pages 2023 and 2025 provide more of an overview of Wei’s disclosed methods (and thus, may be ambiguous), page 2029 appears to provide more specific information. On this page, Wei states that “the WDM switch [i.e., node] reserves the wavelength on the output port, proceeds to make the actual cross-connect by issuing a command to the fabric controller, and forwards the SETUP message to the next hop.” Thus, in the most specific explanation given by Wei it appears that a cross-connect is substantially completed before a set up message is forwarded onward.

Considering all of Wei’s statements together, and presuming that each must be reconciled with the other (or else Wei is inconsistent), the Appellants

respectfully submit that Wei discloses the sending of a SETUP message sometime after a cross-connect has been initiated, processed or made; not substantially at the same time a cross-connect is initiated.

Because Wei does not disclose each and every feature of claims 1, 3-5, 9-15 and 17 Wei cannot anticipate the subject matter of these claims under 35 U.S.C. §102(a).

Accordingly, Appellants respectfully request that the members of the Board reverse the decision of the Examiner, withdraw the rejections and allow claims 1, 3-7, 9-15 and 17.

**B. The Section 103 Rejections**

Claims 8 and 16 were rejected under 35 U.S.C. §103(a) as being unpatentable over Wei in view of an article by Qiao et al. ("Qiao"). Appellants respectfully disagree for at least the following reasons.

Claims 8 and 16 include the use of in-band signaling to initiate cross-connections. The Examiner's position notwithstanding, Wei appears to be directed solely at out-of-band signaling, not in-band signaling. Further, the excerpt from Wei referred to by the Examiner briefly mentions a generalized form of in-band signaling (not the claimed in-band signaling or anything suggestive of the claimed in-band signaling), a form that Wei does not make use of in any event. To overcome this deficiency in Wei, the Examiner relies on Qiao.

After reading Qiao, especially page 26, section 2, the Appellants do not find any mention of in-band signaling.

In more detail, though the Examiner acknowledges that Qiao does not use the terms "in-band signaling", the Examiner takes the position that Qiao nonetheless is directed at such signaling because its techniques involve "control information traveling along with the data" (page 7 of the Final Office Action). However, the text from page 26 of Qiao actually states that a "data

burst follows the control packet after an offset time, T". Thus, the word "after" in the text relates to time, not the same channel.

Accordingly, Appellants respectfully submit that the members of the Board reverse the decision of the Examiner, withdraw the rejections and allow claims 8 and 16.

**Conclusion:**

Appellants respectfully request that members of the Board reverse the decision of the Examiner and allow claims 1 and 3-17.

The Commissioner is authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 50-3777 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

Capitol Patent & Trademark Law Firm, PLLC

By: 

John E. Curtin, Reg. No. 37,602

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Vienna, VA 22183  
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**VIII. CLAIMS APPENDIX**

1. A method for use in a node of a network during a connection setup between a source node and a destination node, the method comprising the steps of:

initiating a cross-connect with an adjacent node;

at substantially the same time as the cross-connect is initiated, sending a connection setup message to a next node before the cross-connect is completed.

2. (Cancelled).

3. The method according to claim 1, wherein the network is an optical transport network.

4. The method according to claim 3, wherein the cross-connect is selected from a group consisting of an electrical-based cross-connect and a transparent wavelength-based optical cross-connect.

5. The method according to claim 1, wherein the connection setup is selected from the group consisting of a wavelength-based connection setup, a SONET-based connection setup, a SDH-based connection setup, and a PDH-based connection setup.

6. A method for use in a node of a network during a connection setup between a source node and a destination node, the connection setup

comprising a forward pass of signaling messages from the source node to the destination node and a reverse pass of signaling messages from the destination node to the source node, the method comprising the steps of:

initiating a cross-connect with an adjacent node on the forward pass of the connection setup;

at substantially the same time as the cross-connect is initiated, sending a connection setup message to a next node; and

checking if the cross-connect was successful on the reverse pass of the connection setup.

7. The method according to claim 6, wherein the forward pass and reverse pass of signaling messages occurs out-of-band.

8. The method according to claim 6, wherein the forward pass and reverse pass of signaling messages occurs in-band.

9. A method for use in a node of a network during a connection setup between a source node and a destination node, the method comprising the steps of:

sending a connection setup message to a next node at substantially the same time as a cross-connect is initiated; and

performing the cross-connect with a downstream node prior to receipt of a signaling message related to a status of at least one cross-connect operation performed at another downstream node.

10. A method for use in a node of a network during a connection setup between a source node and a destination node, the method comprising the steps of:

    sending a connection setup message to a next node from an upstream node at substantially the same time as a cross-connect is initiated; and

    responsive to the received connection setup message, executing a cross-connect with a downstream node.

11. Apparatus comprising:

    a communications interface for providing signaling to a downstream node and for receiving signaling from an upstream node; and

    a processor, responsive to receipt of a connection setup message, sent from the upstream node at substantially the same time as a cross-connect is initiated.

12. The apparatus according to claim 11, wherein the upstream node and the downstream node are in an optical transport network.

13. The apparatus according to claim 12, wherein the cross-connect is selected from the group consisting of an electrical-based cross-connect and a transparent wavelength-based optical cross-connect.

14. The apparatus according to claim 11, wherein the connection setup is selected from the group consisting of a wavelength-based connection

setup, a SONET-based connection setup, a SDH-based connection setup, and a PDH-based connection setup.

15. The apparatus according to claim 11, wherein the signaling occurs out-of-band.

16. The apparatus according to claim 11, wherein the signaling occurs in-band.

17. Apparatus comprising:

a communications interface for receiving signaling, sent from an upstream node at substantially the same time as a cross-connect is initiated, at the upstream node on a forward pass of a connection setup and receiving signaling from a downstream node on a reverse pass of the connection setup; and

a processor for initiating a cross-connect with the downstream node on the forward pass, and for checking if the cross-connect was successful on the reverse pass.

18. (Cancelled).

19. (Cancelled).

20. (Cancelled).

21. (Cancelled).



APPELLANTS' BRIEF ON APPEAL  
U.S. Application No.: 09/919,047  
Atty. Docket: 129250-002056/US

**IX. EVIDENCE APPENDIX**

None.

**X. RELATED PROCEEDINGS APPENDIX**

None.